

Mineral Industry Surveys

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VANADIUM IN JUNE 2005

Reported domestic consumption of vanadium in June 2005 was about 13% less than that of the previous month and was about 7% more than that of June 2004, according to the U.S. Geological Survey. Consumer stocks of vanadium, in all forms, were 398 metric tons (t) at the beginning of 2005 and 290 t at the end of June.

According to Ryan's Notes (2005c), U.S. ferrovanadium (FeV) prices ranged from \$46.625 to \$48.625 per pound of vanadium content in June, as compared with \$56.556 to \$58.778 in May. European FeV prices ranged from \$93.375 to \$97.625 per kilogram in June, as compared with \$107.778 to \$115.000 in May. Vanadium pentoxide (V_2O_5) prices ranged from \$20.625 to \$21.750 per pound in June as compared with \$25.333 to \$26.333 in May.

Highveld Steel & Vanadium Corp. Ltd. (Highveld) scheduled a 3-week maintenance shutdown at one of its kilns that would result in a production loss of 300 t of FeV. All three Highveld kilns are scheduled to be shut down for maintenance at staggered intervals during the year. The No. 1 kiln that was shut down on June 25 is the largest and was the first to be taken

down this year. In addition to normal maintenance work, Highveld planned to make improvements at the kiln. The company's production of V_2O_5 will not be affected by the maintenance shutdown (Ryan's Notes 2005a).

Vanadium Tulachermet (Tula) reportedly has purchased 50% of Nikom AS, the Czech Republic FeV conversion facility, for \$1.5 million. Tula has converted V_2O_5 at Nikom for many years and now will have exclusive rights to the plant's conversion capacity. Tula is believed to have FeV capacity of 10,700 metric tons per year. Russian exports of FeV totaled 8,670 t in 2004, up about 50% from those of 2003. Russian exports of V_2O_5 in 2004 totaled 3,000 t, about the same as in 2003 (Ryan's Notes 2005b).

References Cited

Ryan's Notes, 2005a, Ferroalloy notes: Ryan's Notes, v. 11, no. 27, July 4, p. 4.
Ryan's Notes, 2005b, Ferrovanadium market slips: Ryan's Notes, v. 11, no. 23, June 6, p. 3.
Ryan's Notes, 2005c, [untitled]: Ryan's Notes, v. 11, no. 27, July 4, p. 10.

TABLE 1
U.S. CONSUMPTION AND CONSUMER STOCKS OF VANADIUM, BY FORM¹

(Kilograms, contained vanadium)

	2004 ^p		2005			
			May		June	
	Consumption	Stocks	Consumption	Stocks	Consumption	Stocks
Ferrovandium ²	3,510,000	298,000	307,000 ^r	219,000 ^r	272,000	240,000
Vanadium-aluminum alloy	W	W	W	W	W	W
Other ³	214,000	101,000	21,400 ^r	60,200 ^r	13,000	50,100
Total	3,730,000	398,000	329,000 ^r	279,000 ^r	285,000	290,000

^pPreliminary. ^rRevised. W Withheld to avoid disclosing company proprietary data; included with "Other."

¹Data are rounded to no more than three significant digits; may not add to totals shown.

²Includes other vanadium-iron-carbon alloys as well as vanadium oxides added directly to steel.

³Includes other vanadium alloys, vanadium metal, vanadium pentoxide, vanadates, chlorides, other specialty chemicals, and items indicated by symbol W.

TABLE 2
U.S. CONSUMPTION OF VANADIUM, BY END USE¹

(Kilograms, contained vanadium)

	2004 ^p	2005		
		May	June	Year to date
Steel:				
Carbon	996,000	85,100 ^r	61,700	484,000
High-strength low-alloy	1,150,000	89,700	82,100	524,000
Stainless and heat-resisting	64,500	4,880	5,080	29,500
Full alloy	1,060,000	80,600	82,600	524,000
Tool	238,000	46,900	40,700	212,000
Total steel	3,510,000	307,000 ^r	272,000	1,770,000
Superalloys	8,350	779	764	4,990
Miscellaneous and unspecified ²	211,000	20,800 ^r	12,400	327,000
Total consumption	3,730,000	329,000 ^r	285,000	2,110,000

^pPreliminary. ^rRevised.

¹Data are rounded to no more than three significant digits; may not add to totals shown.

²Includes cast irons, alloys excluding steel and superalloys, chemical and ceramic uses, and other miscellaneous and unspecified uses.

TABLE 3
U.S. IMPORTS AND EXPORTS OF ALUMINUM-VANADIUM MASTER ALLOY AND
VANADIUM METAL, INCLUDING WASTE AND SCRAP¹

(Kilograms, gross weight)

	Aluminum-vanadium master alloy		Vanadium metal, including waste and scrap	
	Quantity	Value	Quantity	Value
Imports for consumption:				
2004	19,100	\$66,700	31,200	\$1,710,000
2005:				
March	--	--	1,360	80,400
April	--	--	9,070	285,000
May:				
Russia	--	--	1,390	201,000
Total	--	--	1,390	201,000
Year to date	1	3,770	15,400	1,070,000
Exports:				
2004	10,900,000	24,000,000	522,000	7,760,000
2005:				
March	399,000	1,280,000	22,200	547,000
April	1,010,000	3,690,000	43,900	3,780,000
May:				
Australia	--	--	454	31,700
Austria	--	--	93	71,100
Brazil	6,210	28,800	--	--
Canada	9,890	55,000	--	--
Germany	--	--	1	2,540
Israel	--	--	17	24,700
Japan	692	3,870	2,180	123,000
Mexico	913,000	1,950,000	2,980	188,000
Taiwan	10,300	49,600	--	--
Thailand	19,000	91,000	--	--
United Kingdom	9,300	51,400	--	--
Total	968,000	2,230,000	5,720	442,000
Year to date	4,310,000	11,900,000	137,000	6,600,000

-- Zero.

¹Data are rounded to no more than three significant digits; may not add to totals shown.

Source: U.S. Census Bureau.

TABLE 4
U.S. IMPORTS AND EXPORTS OF FERROVANADIUM, VANADIUM PENTOXIDE (ANHYDRIDE) AND
OTHER OXIDES AND HYDROXIDES OF VANADIUM¹

(Kilograms, contained vanadium)

	Ferrovanadium		Vanadium pentoxide (anhydride) ²		Other oxides and hydroxides of vanadium	
	Quantity	Value	Quantity	Value	Quantity	Value
Imports for consumption:						
2004	3,020,000	\$62,100,000	1,040,000	\$8,600,000	120,000	\$1,650,000
2005:						
March	9,140,000	11,200,000	60,700	1,920,000	--	--
April	305,000	14,700,000	135,000	6,000,000	13,700	589,000
May:						
Austria	23,900	3,050,000	--	--	8,430	740,000
Canada	14,500	589,000	--	--	--	--
China	--	--	17,000	1,560,000	--	--
Czech Republic	126,000	9,520,000	--	--	--	--
Germany	414	27,500	--	--	--	--
South Africa	--	--	10,300	722,000	--	--
Swaziland	32,300	1,640,000	--	--	--	--
Taiwan	--	--	5,590	430,000	--	--
Total	197,000	14,800,000	32,800	2,710,000	8,430	740,000
Year to date ³	10,900,000	63,300,000	446,000	15,900,000	38,900	2,010,000
Exports:						
2004	267,000	8,770,000	240,000	2,090,000	584,000	4,140,000
2005:						
March	21,200	705,000	--	--	27,800	283,000
April	65,800	3,770,000	10,200	389,000	83,100	740,000
May:						
Brazil	6,660	1,910,000	--	--	2,750	38,900
Canada	--	--	--	--	12,700	113,000
Italy	--	--	32,400	587,000	--	--
Mexico	132,000	2,080,000	6,530	62,000	--	--
Netherlands	--	--	--	--	9,250	141,000
Russia	--	--	--	--	67,500	2,160,000
Spain	--	--	7,000	262,000	--	--
South Africa	--	--	4,130	36,000	--	--
Trinidad & Tobago	--	--	27,400	261,000	--	--
Venezuela	7,710	257,000	--	--	--	--
Total	147,000	4,240,000	77,500	1,210,000	92,200	2,450,000
Year to date	244,000	9,270,000	101,000	1,850,000	325,000	5,110,000

-- Zero.

¹Data are rounded to no more than three significant digits; may not add to totals shown.

²May include catalysts containing vanadium pentoxide.

³May include revisions to previous months data.

Source: U.S. Census Bureau.

TABLE 5
U.S. IMPORTS FOR CONSUMPTION OF VANADIUM-BEARING ASH, SLAG¹

(Kilograms, contained vanadium pentoxide)

	Ash and residues		Ash and residues (not from the manufacture of iron and steel)		Slag, from the manufacture of iron and steel	
	Quantity	Value	Quantity	Value	Quantity	Value
2004	4,260,000	\$8,520,000	11,100,000	\$2,000,000	244,000,000	\$10,400,000
2005:						
March	200,000	471,000	638,000	116,000	105,000	20,200
April	780,000	1,800,000	612,000	89,900	54,800,000	1,130,000
May:						
Canada	--	--	907,000	103,000	47,200,000	948,000
Mexico	60,000	120,000	--	--	--	--
Total	60,000	120,000	907,000	103,000	47,200,000	948,000
Year to date	1,490,000	2,820,000	2,920,000	471,000	102,000,000	2,620,000

-- Zero.

¹Data are rounded to no more than three significant digits; may not add to totals shown.

Source: U.S. Census Bureau.

TABLE 6
U.S. IMPORTS FOR CONSUMPTION OF MISCELLANEOUS VANADIUM CHEMICALS¹

(Kilograms, contained vanadium)

	Sulfates		Vanadates	
	Quantity	Value	Quantity	Value
2004	500	\$19,100	74,700	\$1,150,000
2005:				
March	--	--	6,250	172,000
April	--	--	11,400	204,000
May:				
Germany	--	--	6,710	191,000
Japan	--	--		
South Africa	--	--	6,230	197,000
Total	--	--	12,900	389,000
Year to date	--	--	31,200	806,000

-- Zero.

¹Data are rounded to no more than three significant digits; may not add to totals shown.

Source: U.S. Census Bureau.